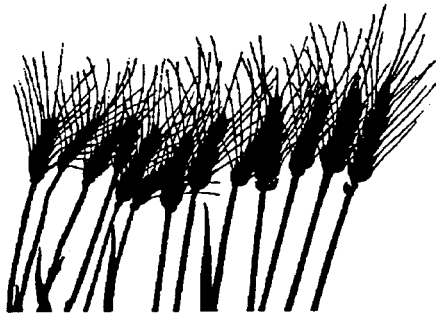
EASTERN COLORADO

WHEAT FIELD DAYS

Colorado State University



Crops Testing

JUNE 1995

AGRICULTURAL EXPERIMENT STATION AND COOPERATIVE EXTENSION

**Colorado State University, U.S. Department of Agriculture and Colorado counties cooperating.
Cooperative Extension programs are available to all without discrimination.**

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1994-95 WINTER WHEAT TEST PLOTS

Sponsored by:
Colorado State University Cooperative Extension
and Agricultural Experiment Station

Coordinated by J.F. Shanahan, J.J. Johnson, and J.S. Quick

INTRODUCTION

The purpose of these plots is to provide information for farmers, elevator managers, extension agents, and others in the wheat industry. Valuable assistance and guidance were received from the USDA, the Colorado Wheat Administrative Committee, the Colorado Seed Growers Association, vocational agricultural teachers, Cooperative Extension agents and private industry. In 1995, there are 9 dryland winter wheat test plots in eastern Colorado; one dryland test on the western slope and three irrigated tests in eastern Colorado. The variety trials at each location consist of 40 varieties in the lower moisture (mostly southern) tests, 40 in the higher moisture (mostly northern) tests, and 28 in the irrigated tests. The southern tests have more tall varieties since they are planted in areas where moisture stress is usually greater.

Several Russian aphid experiments have been integrated into the test plot program. This includes a seeding rate study where TAM 107 and three aphid resistant lines are planted at 500000, 600000, and 700000 plants/acre.

Other information in this handout describes each variety in the plot, a planting plan showing the four replication locations of all varieties and long term performance summaries of winter wheat and feed grain varieties.

Study these test plots carefully and make your own evaluations regarding emergence, maturity, standability, head type, height, disease and insect resistance and other characteristics that interest you. We hope that you will return to these test plots before harvest and continue to take notes on the plot. When you receive information after harvest, study the data carefully. It is most important to look at summary data to determine what happened at other locations and other years.

VARIETAL DESCRIPTIONS

LOCATION *LM	HM	I	VARIETY	DESCRIPTION
x	x	x	**Akron**	A Colorado release (CO880169) in 1994 from the cross TAM 107/HAIL. It is a semi-dwarf with lax heads, broad adaptation, resistance to leaf rust and excellent quality.
x	x		Alliance	It was developed by Nebraska and the USDA-ARS from the cross Arkan/Colt/Chisholm sib. It is a moderately early maturing and medium height variety. It has fair to good winter hardiness, short coleoptile, good tillering ability, moderately strong straw, and good milling/baking qualities. Alliance is similar to Redland in test weight and protein. It has shown above normal tolerance to crown/root rot.
		x	AP7501	New winter wheat hybrid from Agripro.
		x	AP7601	New winter wheat hybrid from Agripro.
	x		Arapahoe	A Nebraska release (NE82656) in 1988. It is medium height with very good winter hardiness and is similar to Brule, but with higher test weight and one day earlier.
x	x		Arlin	A Kansas release (KSSB-369-7) to the American White Wheat Producers Association. It is a hard white winter wheat and is an early semi-dwarf with marginal winter hardiness. It is moderately resistant to Soil Borne Mosaic Virus, stem and leaf rust. Arlin has milling and dough mixing properties similar to Newton and is very sprout susceptible.
x			Baca	A selection from Scout released by Colorado in 1973. Similar to Scout, but has greater uniformity and yield advantage in drought stress conditions. It is stem rust resistant and susceptible to leaf rust. Milling/baking quality is excellent.
x			Buckskin	An older Nebraska tall variety with adaptation to the north central area of Colorado and used as a check in this test.
	x	x	Coronado	A new release from Agripro and was tested as W91 - 287.

*LM = Lower Moisture Dryland
HM = Higher Moisture Dryland
I = Irrigated

LOCATION LM	HM	I	VARIETY	DESCRIPTION
	x	x	Custer	**It was developed by Oklahoma State University from the cross Chisholm/TAM105/ and a Romanian line. Medium early and it is susceptible to Soil Borne Mosaic Virus. It is moderately resistant to leaf rust. It has excellent yield potential, but very questionable quality.**
x	x	x	Halt	A Colorado release (RWAE5W) in 1994, with resistance to the Russian wheat aphid. k is later than TAM 107 by 3-4 days and semi-dwarf with excellent quality.
x	x	x	Hawk	A 1981 release from Agripro derived from crosses between Mexican spring wheats and hard winter wheats. Hawk is similar to Vona in most respects, but has larger kernels, greater tolerance to leaf rust, and lower late season drought tolerance.
x	x		Ike	A Kansas release (KS89H481) in 1993, tall semi-dwarf, derived from crosses between Colt, Lamar, and others. Excellent yields in western Kansas, but susceptible to Wheat Streak Mosaic Virus. Ike heads about days later than TAM 107. Milling/baking properties are similar to Lamar, but has stronger mixing requirements.
x	x		Jagger	It was developed from a cross of a sister-line of Karl by Stephens, a soft white wheat. It is resistance to Soil Borne Mosaic Virus, spindle streak, tan spot, and speckled leaf blotch. It is moderately resistant to glume blotch, bacterial streak, cephalosporium stripe and wheat streak. It is susceptible to powdery mildew, Hessian fly, greenbugs and Russian wheat aphid. It is early maturing, bronze chaffed, and with good straw strength. It has good milling/baking traits. Not as good of test weights and protein as Karl. Tends to green up early in spring. Excellent grazing wheat.
	x	x	Jules	A Colorado (CO860094) semi-dwarf height variety derived from a cross between NE76667 (related to Agate) and Hawk. k is adapted to long season areas of eastern Colorado. It has excellent winter hardiness, resistance to leaf rust, and excellent quality. Test weight is lower than most varieties, especially under late season heat or water stress.
x	x	x	Karl 92	A Kansas semi-dwarf released in 1992. It is a reselection from 'Karl', is similar in most traits, but has slightly improved leaf rust resistance, earlier maturity, and is higher yielding than Karl. Second year in eastern Colorado variety trials.

LOCATION L	M	H	M	I	VARIETY	DESCRIPTION
x					KS84-HW196	Hard white winter wheat released by Kansas to American White Wheat Producers Association in 1986. It is similar to Newton in most traits.
x	x				Lamar	A Colorado release in 1988, medium height and derived from a cross of Vona with an experimental line to improve test weight. Excellent drought resistance.
	x	x			Laredo	An Agripro release (W87-018) in 1992. An intermediate height semi-dwarf variety with strong straw, early maturity, and excellent leaf rust resistance. Fourth year in eastern Colorado variety trials.
	x				Longhorn	An Agripro release (W188-024) in 1991 and derived from NS2630-1/Thunderbird. An intermediate height, awnless wheat with vigorous spring growth. Third year in eastern Colorado variety trials.
	x	x			Ogallala	An Agripro release (W189-055) in 1993. Targeted for current TAM 107 areas of western plains. Third year in eastern Colorado variety trials.
	x				Quantum 566	A hybrid wheat from Hybritech, Inc. First year in eastern Colorado variety trials.
	x				Rio Blanco	Hard white winter wheat released by Agripro. Semi-dwarf height with moderate resistance to sprouting and better winter hardiness than Arlin.
		x			Rowdy	A new release from Agripro and was tested as W91 - 091.
x	x				Sandy	A 1980 Colorado release from crosses between a Mexican semi-dwarf, Trapper and Centurk. Sandy has medium height and maturity and excellent stand establishment ability. It has tolerance to root rot, excellent winter hardiness, and excellent milling and baking quality.
	x				Scout 66	A selection from Scout released by Nebraska in 1967. It is medium maturing, tall with weak straw, and good winter hardiness. It has moderate resistance to leaf and stem rust. It is very resistant to shattering, but some difficulty in threshing.

LOCATION L	M	H	M I	VARIETY	DESCRIPTION
x	x	x		TAM 107	An early maturing reddish brown-chaffed semi-dwarf released by the Texas Agric. Exp. Station in 1984. It is a backcross-derived line from TAM 105. It is similar in appearance to TAM 105, but has resistance to stem rust, good winter hardiness, excellent heat tolerance, good emergence ability, good straw strength, and resistance to biotype E greenbug. It has tolerance to the mite vector, thus reducing Wheat Streak Mosaic Virus infection. It is susceptible to Hessian fly and very susceptible to leaf rust.
x	x	x		TAM 200	A white-chaffed, short semi-dwarf released by the Texas Agric. Exp. Station in 1987. It has very good leaf rust resistance and tolerance to the mite vector of Wheat Streak Mosaic Virus. Winter hardiness is good when irrigated, but very marginal for dryland conditions. Has excellent performance under irrigation.
x	x	x		Vista	A Nebraska release (NE87615) in 1992 semi-dwarf variety derived primarily from Brule and Centurk. It has medium winter hardiness and heading time similar to Arapahoe. Fourth year in eastern Colorado variety trials.
x	x	x		Vona	A Colorado release in 1976 derived from a cross between Lancer and experimental wheats from Kansas, Colorado and Mexico. It is an early maturing semi-dwarf wheat with strong straw and fair winter hardiness. It has moderate resistance to stem and leaf rust and resistance to Hessian fly.
x	x			Wichita	A Kansas release in 1944. It is a tall, early maturity variety which shatters, has weak straw, is susceptible to leaf and stem rust, has excellent test weight, and poor to fair milling/baking quality. This variety is grown as the long term check in our dryland test plots.
		x		WX92-0408	Experimental hybrid from Agripro.
x	x	x		Yuma	A Colorado semi-dwarf variety derived from the cross NS14/NS25/2*Vona released in 1991. Similar to TAM 107 in grain yield, but superior in grain quality and leaf rust resistance. Similar to Vona in appearance, winter hardiness, and coleoptile length.

New Colorado experimental lines (CO numbers)

Fourth year test:	890323	Third year test:	900138 900166 900777
Second year test:	910239 910423 910424 910748 910929 910944	First year test:	920010 920666 920119 920682 920178 920696 920220 920760 920475 920776 920480 920790 920562 920918

Table 1. Comparison of winter wheat varieties for seeded acreage end agronomic pest, and quality traits.[1]

Variety	Percent Colorado Seeded Acreage 1994[2]	Relative						Resistance or Tolerance to				Relative Quality		
		Ht (in)	Mat	TW	Straw Strgth	Winter Hardy	Coleop length (mm)	Leaf Rust	Stem Rust	Hess. Fly	Wheat Streak Mosaic	Milling	Mixing[3]	Loaf Vol.
Arapahoe	1.3	39	4	4	4	2	75	1	1	5	8	2	2	2
Baca	3.9	47	2	4	6	3	120	5	5	-	7	2	3	3
Hawk	2.3	29	3	4	4	3	75	7	5	8	6	2	1	3
Jules	-	35	4	6	3	4	75	1	2	-	6	2	2	2
Lamar	5.5	41	4	4	4	2	110	7	2	8	6	2	3	2
Laredo		30	3	4	3	3	8	0	1	2	-	-	2	2	3
Newton	0.9	31	3	4	4	6	75	7	6	8	6	2	2	2
QT 542	-	41	4	3	4	1	110	7	6	-	-	-	-	-
QT 549	-	30	4	3	3	1	75	5	3	-	-	-	-	-
Rawhide	-	32	3	4	4	3	80	7	2	-	7	2	2	3
Sandy	1.2	43	5	3	5	2	120	3	-	8	-	2	0	4
Scout(s)	4.3	47	2	4	6	3	120	5	5	7	7	2	3	3
TAM 107	60.7	31	2	5	3	3	80	9	1	8	2	2	2	2
TAM 200	2.3	27	3	3	1	8	75	1	1	8	2	3	3	4
Thunderbird	1.1	39	3	4	4	5	110	2	1	8	5	-	-	-
Tomahawk	1.5	30	3	4	2	3	75	3	1	-	7	2	2	2
Turkey	-	59	8	6	9	1	120	8	8	9	7	2	3	2
Vista	-	31	3	4	4	3	70	5	3	5	6	2	3	3
Vona	1.7	29	3	5	3	6	70	7	3	5	8	2	2	2
Wichita	-	51	1	4	8	6	120	5	8	8	-	2	5	4
Yuma	2.1	30	3	5	2	5	70	5	1	-	7	2	2	2

Rated on a scale of 0 to 9; except for maturity (where 0 is earliest and 9 latest), 0 is best and 9 poorest. A dash indicates insufficient evidence for classification.

[2]Includes most varieties grown on at least 0.5% of acreage for 1993 harvest, based on Colorado Crop & Livestock Reporting Service survey.

[3]A *zero rating means exceptionally long mixing time.* Varieties with a 0 rating are particularly good for blending with mellow or weak wheats. Mixing time will vary with the environmental conditions under which the varieties are grown.

Table 2. 1994-1995 Colorado winter wheat higher moisture dryland variety trials.

LOCATION
AKRON, BENNETT, BURLINGTON (D), GENOA, & OVID

REP 1

1 WICHITA	40 AGRI. RIO BLANCO
2 SCOUT 66	39 CO920178
3 SANDY	38 CO900777
4 LAMAR	37 CO920666
5 VONA	36 CO920696
6 AGRI. HAWK	35 ARLIN
7 TAM 107	34 CO910239
8 YUMA	33 CO920918
9 TAM 200	32 CO910423
10 ARAPAHOE	31 CO890323
11 JULES	30 AGRI. LONGHORN
12 VISTA	29 CO910748
13 KARL 92	28 CO920010
14 IKE	27 CO900166
15 AKRON	26 CO910424
16 HALT	25 AGRI. OGALLALA
17 JAGGER	24 CO920119
18 CUSTER	23 CORONADO
19 ALLIANCE	22 QT566
20 AGRIPRO LAREDO	21 CO900138

REP 2

41 AGRI. LONGHORN	**80 IKE**
42 CORONADO	**79 CO890323**
43 CO900166	**78 JULES**
44 CO920010	**77 CO910239**
45 ALLIANCE	**76 WICHITA**
46 CO920119	**75 CO920918**
47 CO920666	**74 CO920178**
48 CO920696	**73 AGRI. LAREDO**
49 AKRON	**72 CUSTER**
50 TAM 200	**71 JAGGER**
51 SCOUT 66	**70 CO900777**
52 CO900138	**69 ARLIN**
53 SANDY	**68 HALT**
54 VONA	**67 CO910748**
55 LAMAR	**66 CO910424**
56 AGRI. OGALLALA	**65 AGRI. RIO BLANCO**
57 VISTA	**64 AGRI. HAWK**
58 TAM 107	**63 QT566**
59 CO910423	**62 ARAPAHOE**
60 YUMA	**61 KARL 92**

REP 3

81 AGRI. OGALLALA	120 HALT
82 AGRI. LONGHORN	119 KARL 92
83 CORONADO	118 JAGGER
84 AGRI. RIO BLANCO	117 WICHITA
85 ARLIN	116 CUSTER
86 QT566	115 SCOUT 66
87 CO890323	114 TAM 107
88 CO900138	113 VONA
89 CO900166	112 ALLIANCE
90 CO900777	111 YUMA
91 CO910239	110 AGRI. HAWK
92 CO910423	109 ARAPAHOE
93 CO910424	108 AKRON
94 CO910748	107 JULES
95 CO920010	106 TAM 200
96 CO920119	105 LAMAR
97 CO920178	104 VISTA
98 CO920666	103 IKE
99 CO920696	102 AGRI. LAREDO
100 CO920918	101 SANDY

REP 4

121 TAM 107	160 CO900777
122 WICHITA	159 VONA
123 AKRON	158 ARAPAHOE
124 CO910748	157 SANDY
125 AGRI. LAREDO	156 CO920119
126 AGRI. LONGHORN	155 ALLIANCE
127 SCOUT 66	154 AGRI. HAWK
128 CO910424	153 QT566
129 YUMA	152 JAGGER
130 IKE	151 CO920178
131 VISTA	150 ARLIN
132 TAM 200	149 AGRI. OGALLALA
133 CO920010	148 HALT
134 CO910239	147 CO920918
135 AGRI. RIO BLANCO	146 CO910423
136 CO900138	145 JULES
137 CO920666	144 CO900166
138 LAMAR	143 CO890323
139 KARL 92	142 CO920696
140 CUSTER	141 CORONADO

Table 3. 1994-1995 Colorado winter wheat lower moisture dryland variety trials.

LOCATION
BRIGGSDALE, LAMAR, SHERIDAN LAKE & WALSH (D)

Rep 1

201	WICHITA	240	CO910929
202	BACA	239	CO900138
203	BUCKSKIN	238	CO920790
204	SANDY	237	CO910944
205	LAMAR	236	CO920010
206	VONA	235	CO920760
207	AGRIPRO HAWK	234	CO900166
208	TAM 107	233	CO900777
209	YUMA	232	CO910423
210	TAM 200	231	CO920475
211	VISTA	230	CO920480
212	KARL 92	229	CO920776
213	IKE	228	CO910748
214	AKRON	227	CO910424
215	HALT	226	CO910239
216	KSHW84196	225	CO920562
217	ARLIN	224	CO920220
218	JAGGER	223	CO920696
219	ALLIANCE	222	CO920178
220	CO890323	221	CO920682

REP 2

241	CO920776	280	CO920696
242	CO920760	279	CO920475
243	HALT	278	CO920682
244	TAM 200	277	CO910929
245	CO910748	276	CO910423
246	CO920480	275	CO910944
247	AKRON	274	JAGGER
248	LAMAR	273	VISTA
249	BACA	272	CO920220
250	CO890323	271	CO920178
251	CO910424	270	CO900166
252	SANDY	269	AGRIPRO HAWK
253	KARL 92	268	VONA
254	KSHW84196	267	WICHITA
255	TAM 107	266	CO92001 O
256	CO920562	265	CO910239
257	YUMA	264	CO920790
258	CO900777	263	BUCKSKIN
259	ALLIANCE	262	ARLIN
260	CO900138	261	IKE

REP 3

281	CO900138	320	SANDY
282	CO900166	319	CO890323
283	CO900777	318	ARLIN
284	CO910239	317	JAGGER
285	CO910423	316	IKE
286	CO910424	315	LAMAR
287	CO910748	314	KARL 92
288	CO910929	313	AKRON
289	CO910944	312	TAM 107
290	CO920010	311	KSHW84196
291	CO920178	310	TAM 200
292	CO920220	309	ALLIANCE
293	CO920475	308	BACA
294	CO920480	307	BUCKSKIN
295	CO920562	306	VISTA
296	CO920682	305	YUMA
297	CO920696	304	HALT
298	CO920760	303	VONA
299	CO920776	302	WICHITA
300	CO920790	301	AGRIPRO HAWK

REP 4

321	CO920682	360	CO920475
322	KSHW84196	359	CO920010
323	CO910929	358	VISTA
324	AGRIPRO HAWK	357	WICHITA
325	CO900138	356	LAMAR
326	CO920562	355	CO920220
327	IKE	354	CO920790
328	CO920776	353	CO920760
329	AKRON	352	SANDY
330	BACA	351	JAGGER
331	CO920480	350	YUMA
332	TAM 200	349	CO910748
333	BUCKSKIN	348	ALLIANCE
334	ARLIN	347	CO910944
335	CO910423	346	CO920696
336	CO910239	345	CO920178
337	TAM 107	344	CO890323
338	CO910424	343	KARL 92
339	VONA	342	CO900777
340	CO900166	341	HALT

Table 4. 1994-1995 Colorado winter wheat irrigated variety trials.

LOCATION
ROCKY FORD (I), WALSH (I), & YUMA (I)

REP 1

401 VONA
402 AGRI. HAWK
403 TAM 107
404 YUMA
405 TAM 200
406 JULES
407 VISTA
408 KARL 92
409 AKRON
410 HALT
411 CUSTER
412 AGRI. LAREDO
413 AGRI. OGALLALA
414 ROWDY
428 CO920475
427 AP-7501
426 WX92-0408
425 CO920119
424 CO910423
423 CO890323
422 CO910424
421 CO900166
420 AP-7601
419 CO900138
418 CO910748
417 CO910239
416 CO920480
415 CORONADO

REP2

429 CO910423
430 WX92-0408
431 CO900138
432 CO900166
433 CUSTER
434 YUMA
435 AGRI. OGALLALA
436 CO920119
437 AKRON
438 AGRI. HAWK
439 VONA
440 ROWDY
441 CO890323
442 CO920480
456 TAM 200
455 HALT
454 CO910424
453 AGRI. LAREDO
452 VISTA
451 TAM 107
450 AP-7601
449 JULES
448 KARL 92
447 CO910748
446 AP-7501
445 CO910239
444 CORONADO
443 CO920475

REP 3

457 CORONADO
458 AP-7501
459 AP-7601
460 WX92-0408
461 CO920480
462 CO890323
463 CO900138
464 CO900166
465 CO910239
466 CO910423
467 CO910424
468 CO910748
469 CO920119
470 CO920475
484 CUSTER
483 VISTA
482 JULES
481 VONA
480 TAM 107
479 AGRI. OGALLALA
478 AKRON
477 KARL 92
476 AGRI. LAREDO
475 YUMA
474 AGRI. HAWK
473 TAM 200
472 ROWDY
471 HALT

REP 4

485 AGRI. HAWK
486 CO800166
487 CO920119
488 TAM 200
489 CO800138
490 CUSTER
491 CO890323
492 WX92-0408
493 CO910239
494 VONA
495 ROWDY
496 CORONADO
497 JULES
498 CO910424
512 CO910748
511 YUMA
510 AGRI. LAREDO
509 CO910423
508 CO920475
507 TAM 107
506 VISTA
505 AP-7601
504 AKRON
503 HALT
502 AGRI. OGALLALA
501 CO920480
500 AP-7501
499 KARL 92

Table 5. Winter wheat high moisture performance trials summary for 1994.

VARIETY NAME	LOCATION YIELDS Akron	Bennett	Burlington	Genoa	Ovid	YLD AVG	TW AVG	PL HT AVG
	BU/AC						LB/BU	INCHES
CO910424	**31.2**	**34.4**	**61.7**	**25.9**	**30.7**	**36.8**	**55.2**	**29**
QUANTUM 566	**23.1**	**37.2**	**61.8**	**23.1**	**36.6**	**36.4**	**53.5**	**29**
CO910423	**27.9**	**37.7**	**57.4**	**22.0**	**32.8**	**35.6**	**54.8**	**26**
YUMA	**35.5**	**32.1**	**58.1**	**19.0**	**33.1**	**35.6**	**53.9**	**25**
IKE	32.2	33.9	52.9	24.1	30.7	34.8	55.6	27
VISTA	24.4	33.7	58.6	22.6	31.9	34.2	53.2	24
VONA	34.1	31,0	53.6	20.0	32.0	34.1	54.4	25
AGRIPRO LAREDO	32.0	28.7	54.1	22.3	33.1	34.0	54.8	24
AKRON	**25.4**	**32.5**	**60.1**	**19.3**	**30.4**	**33.5**	**53.3**	**27**
KARL 92	**30.3**	**31.1**	**51.7**	**21.4**	**33.0**	**33.5**	**55.5**	**24**
TAM 107	**30.8**	**33.4**	**50.0**	**22.3**	**29.6**	**33.2**	**53.7**	**24**
QUANTUM 549	**20.6**	**30.7**	**55.3**	**21.5**	**35.7**	**32.8**	**53.1**	**28**
AGRIPRO LONGHORN	31.5	26.8	51.2	22.5	30.2	32.4	56.0	28
ARAPAHOE	24.6	28.3	56.9	21.6	30.4	32.4	53.5	27
HALT	28.7	32.4	50.1	21.8	28.7	32.3	53.3	24
AGRIPRO HAWK	29.1	27.8	53.1	22.2	28.6	32.2	53.5	26
CO900166	**22.3**	**31.0**	**55.9**	**18.3**	**32.1**	**31.9**	**55.4**	**25**
CO890323	**30.2**	**25.6**	**55.4**	**21.0**	**27.3**	**31.9**	**55.9**	**27**
TAM 200	**30.9**	**28.6**	**52.2**	**18.9**	**28.9**	**31.9**	**57.3**	**24**
SANDY	**24.8**	**29.8**	**51.6**	**21.7**	**29.8**	**31.5**	**55.3**	**29**
SCOUT 66	32.3	34.7	47.7	19.4	23.4	31.5	55.2	32
AGRIPRO OGALLALA	27.1	25.1	53.5	19.5	29.8	31.0	55.6	23
LAMAR	24.7	32.4	46.9	20.8	27.7	30.5	55.5	29
FUNDULEA	25.8	27.2	47.1	17.5	30.6	29.6	54.4	25
AGRIPRO RIO BLANCO (HW)*	**23.8**	**24.9**	**51.7**	**19.1**	**27.8**	**29.5**	**54.1**	**23**
WICHITA	**30.2**	**33.6**	**43.8**	**17.4**	**22.1**	**29.4**	**56.2**	**33**
ARLIN (HW)*	**25.3**	**28.0**	**49.2**	**18.9**	**24.1**	**29.1**	**55.1**	**23**
JULES	**16.3**	**28.7**	**51.7**	**17.8**	**26.9**	**28.3**	**50.5**	**24**
AVERAGE	27.7	30.8	53.3	20.8	29.9	32.5	54.6	26
LSD (.05)	7.65	5.04	5.57	NS	5.23			

*HW - Hard White Wheat

Table 6. Winter wheat high moisture performance trials 2-Yr & 3-Yr summary.

VARIETY NAME	YEAR 1994	1993	1992	2-YR AVG*	3-YR AVG
	BU/AC				
QUANTUM 549	**32.8**	**68.2**	**42.7**	**50.5**	**47.9**
AKRON	**33.5**	**65.8**	**38.3**	**49.7**	**45.9**
YUMA	**35.6**	**62.9**	**38.1**	**49.3**	**45.5**
VISTA	**34.2**	**64.1**	**45.0**	**49.2**	**47.8**
AGRIPRO LAREDO	34.0	63.7		48.9	—
VONA	34.1	63.1	35.9	48.6	44.4
TAM 107	33.2	63.0	46.2	48.1	47.5
CO890323	31.9	64.0	—	48.0	—
AGRIPRO HAWK	**32.2**	**63.7**	**43.4**	**48.0**	**46.4**
TAM 200	**31.9**	**64.1**	**44.4**	**48.0**	**46.8**
CO900166	**31.9**	**63.7**	**—**	**47.8**	**—**
AGRIPRO LONGHORN	**32.4**	**61.9**	**—**	**47.2**	**—**
ARAPAHOE	32.4	61.3	35.0	46.9	42.9
IKE	34.8	58.4		46.6	.....
AGRIPRO OGALLALA	31.0	61.7	—	46.4	—
JULES	28.3	63.5	49.2	45.9	47.0
HALT	**32.3**	**59.3**	**—**	**45.8**	**—**
SANDY	**31.5**	**59.0**	**44.5**	**45.3**	**45.0**
LAMAR	**30.5**	**56.8**	**42.1**	**43.7**	**43.1**
SCOUT 66	**31.5**	**55.8**	**38.8**	**43.7**	**42.0**
WICHITA	29.4	43.3	31.6	36.4	34.8
AVERAGE	**32.4**	**61.3**	**41.1**		

*Ranked by the 1994 & 1993 2-Yr averages.

Table 7. Winter wheat lower moisture performance trials summary in 1994.

VARIETY NAME	LOCATION YIELDS Lamar**	Walsh	YLD AVG	TW AVG	PL HT AVG
	BU/AC			LB/BU	INCHES
CO910747	24.2	29.7	27.0	52.6	27
CO910748	23.8	29.7	26.8	55.1	27
AKRON	22.2	30.0	26.1	54.4	29
TAM 200	22.9	28.6	25.8	57.2	27
AGRIPRO HAWK	23.4	27.1	25.3	53.8	28
TAM 107	19.0	30.1	24.6	52.4	28
LAMAR	20.9	28.2	24.6	54.7	31
CO890323	20.7	28.2	24.5	55.9	29
SANDY	20.3	28.3	24.3	55.6	32
VISTA	19.6	28.1	23.9	53.1	26
YUMA	20.3	27.1	23.7	53.8	26
VONA	21.7	24.2	23.0	56.3	29
KSHW196 (HW)*	19.6	26.2	22.9	53.7	29
IKE	20.2	24.9	22.6	52.9	30
ARLIN (HW)*	22.0	23.0	22.5	50.8	27
HALT	17.4	27.5	22.5	52.7	26
KARL 92	19.6	23.8	21.7	49.6	27
BUCKSKIN	18.2	24.3	21.3	53.0	35
BACA	15.6	24.9	20.3	52.6	32
QUANTUM 542	14.8	24.5	19.7	52.4	30
WICHITA	11.7	23.0	17.4	55.0	35
AVERAGE	19.9	26.7	23.3	53.7	29
LSD (.05)	3.98	4.12			

*HW - Hard White Wheat

**Lamar location received about 30-40% hail damage.

Table 8. Winter wheat lower moisture performance trials 2-Yr & 3-Yr summary.

VARIETY NAME	YEAR 1994	1993	1992	2-YR AVG*	3-YR AVG
	BU/AC				
TAM 200	25.8	36.7	27.9	31.3	30.1
AKRON	26.1	32.0	30.2	29.1	29.4
AGRIPRO HAWK	25.3	31.9	27.9	28.6	28.4
TAM 107	24.6	32.0	28.1	28.3	28.2
SANDY	24.3	32.2	28.2	28.3	28.2
LAMAR	24.6	30.3	32.1	27.5	29.0
YUMA	23.7	30.5	28.2	27.1	27.5
VONA	23.0	31.1	25.1	27.1	26.4
QUANTUM 542	19.7	30.3	32.0	25.0	27.3
BACA	20.3	25.6	26.7	23.0	24.2
WICHITA	17.4	22.0	23.9	19.7	21.1
AVERAGE	73.2	30.4	28.2		

*Ranked by the 1994 & 1993 2-Yr averages.

Table 9. Winter wheat irrigated performance trials summary for 1994.

VARIETY NAME	LOCATION YIELDS* Burlington	Walsh	YLD AVG	TW AVG	PL HT AVG	LR** AVG
	BU/AC			LB/BU	INCHES	(0-9)
AKRON	**64.1**	**57.1**	**60.6**	**54.6**	**36**	**1**
KARL 92	**68.3**	**50.8**	**59.6**	**55.9**	**31**	**1**
VISTA	**59.3**	**58.5**	**58.9**	**54.4**	**33**	**0**
AGRIPRO OGALLALA	**62.2**	**55.3**	**58.8**	**55.3**	**32**	**0**
C0890323	57.4	59.4	58.4	57.1	34	1
TAM 200	55.8	59.1	57.5	55.8	31	0
YUMA	63.2	51.1	57.2	53.9	35	1
AGRIPRO PONDEROSA	**60.5**	**51.7**	**56.1**	**55.5**	**33**	**0**
AGRIPRO HICKOK	**58.5**	**51.7**	**55.1**	**57.1**	**30**	**1**
AGRIPRO LAREDO	**60.4**	**49.4**	**54.9**	**53.4**	**31**	**0**
VONA	**64.4**	**44.4**	**54.4**	**53.6**	**34**	**1**
TAM 107	**57.5**	**50.6**	**54.1**	**53.8**	**32**	**3**
AGRIPRO HAWK	56.7	49.4	53.1	52.9	34	2
AGRIPRO TOMAHAWK	61.9	42.5	52.2	53.2	31	0
JULES	**47.0**	**47.2**	**47.1**	**51.0**	**34**	**0**
AVERAGE	**59.8**	**51.9**	**55.8**	**54.5**	**33**	**1**
LSD (.05)	**6.50**	**NS**				

**Fort Collins was not harvested due to severe spring wind erosion.

**Leaf rust (L R) scale 0-9, with 1 having least infestation and 9 most. Leaf rust readings taken at Burlington only.

Table 10. Winter wheat irrigated performance trials 2-Yr & 3-Yr summary.

VARIETY NAME	YEAR 1994	1993	1992	2-YR AVG *	3-YR AVG
AKRON	**60.6**	**63.6**	**88.2**	**62.1**	**70.8**
AGRIPRO LAREDO	**54.9**	**61.7**	**82.9**	**58.3**	**66.5**
TAM 200	**57.5**	**59.1**	**90.8**	**58.3**	**69.1**
AGRIPRO OGALLALA	**58.8**	**56.3**	—	**57.6**	—
TAM 107	54.1	60.0	85.7	57.1	66.6
AGRIPRO TOMAHAWK	52.2	60.6	80.4	56.4	64.4
YUMA	57.2	54.9	90.1	56.1	67.4
AGRIPRO HAWK	**53.1**	**56.2**	**79.3**	**54.7**	**62.9**
AGRIPRO PONDEROSA	**56.1**	**49.4**	—	**52.8**	—
VONA	**54.4**	**50.5**	**85.8**	**52.5**	**63.6**
JULES	**47.1**	**54.7**	**80.6**	**50.9**	**60.8**
AVERAGE	55.1	57.0	84.9		

**Ranked by the 1994 & 1993 2-Yr averages.